



# MARSHALL STAR

Serving the Marshall Space Flight Center Community

Dec. 2, 2004

## NASA reaches major Solid Rocket Booster milestone

### Return to Flight Update

By Lynnette Madison

Major hardware for the Space Shuttle's Return to Flight mission, STS-114, is coming together at NASA's Kennedy Space Center, Fla.

An important milestone was achieved Nov. 22, when technicians began stacking Space Shuttle Discovery's right Solid Rocket Booster in the Vehicle Assembly Building. This signifies the beginning of assembly for the flight, which is planned for launch next spring.

Stacking the Shuttle's Boosters on the Mobile Launch Platform is a significant step to prepare Discovery for launch. The Mobile Launch Platform, a two-story tall, nine-million-pound steel structure, is the launch base for the Space Shuttle.

Once the Shuttle vehicle is assembled, the platform is transported to the launch pad. The Shuttle vehicle consists of the orbiter, Solid Rocket Boosters and the External Tank.

"In our Return to Flight planning, we have systematically emphasized that our preparations for launch would be milestone driven," said Michael Kostelnik, deputy associate administrator, International Space Station and Space Shuttle Programs. "Stacking of the Shuttle's Boosters is clearly one of those key milestones and indicative of the progress the program continues to make."

Assembly will continue this week until both the right and left Solid Rocket Boosters are stacked and ready to be connected with the External Tank and the Orbiter. The next step will be to join the External Tank to the Boosters.

*See Milestone on page 2*



Kennedy Space Center photo

The aft skirt and lower segment of Discovery's right Solid Rocket Booster moves into the Vehicle Assembly Building at Kennedy Space Center.

NASA/A&M

University

High School

Senior Day



Emmett Given, Marshall Center

The annual NASA/Alabama A&M University High School Senior Day on Nov. 20 drew nearly 6,000 students from across the United States. From left, Ken Aguilar, NASA deputy assistant administrator for Diversity and Equal Opportunity, joins Marshall Center Director David King; Dr. Dorothy Hayden-Watkins, NASA assistant administrator for Diversity and Equal Opportunity; and Ellen Washington of WJAB Radio for a live broadcast during the event.

### Director's Update is Friday

All Marshall team members are asked to attend an Update with Marshall Center Director David King at 10 a.m. Friday in Morris Auditorium.

### Tree lighting, Holiday Reception set at the Marshall Center

The Marshall Center's annual tree lighting ceremony will be at 4:45 p.m. Dec. 6 in front of Bldg. 4200.

The Holiday Reception will be from 1 to 3 p.m. Dec. 9 in the Center Activities Bldg. 4316. This year's theme is "Holiday Magic in the Snow."

# King lauds Agency's 2004 accomplishments

## Director's Corner

**B**efore 2004 comes to a close, I want to comment on what we have accomplished. Much of our work has focused on the major initiatives that accountability and responsibility handed to us.

I think of the Vision, Transformation, One NASA, Culture Change, and Return to Flight as some of the significant initiatives and issues we have worked on together. Many of these initiatives and issues were born out of the Columbia tragedy. And quite poignantly, that day in February 2003 began a succession of opportunities for the Agency to re-evaluate itself. It has been through this re-evaluation that the Agency strategically and comprehensively began to make needed changes.

The transformation NASA is undergoing is no small feat. In addition to streamlining us to better focus on safety, quality and efficiency, the transformation is making us better aligned and better defined to do the work needed to return the Space Shuttle to safe flight and prepare us for the work needed to realize the Vision for Space Exploration.

Much will be said regarding NASA's performance in 2004. We can boast that we made great strides in changing how we do business. We rolled up our sleeves and worked many long hours to take care



**David King**  
**Marshall Center Director**

of America's space program. From President Bush's announcement of the Vision for Space Exploration to the launch of Gravity Probe B, and from the redesigns on the External Tank to the awe-inspiring photos beamed back to Earth from the Mars Rovers (which are still going strong almost a year after landing on the Red Planet), we, collectively as an Agency continued to raise the bar on excellence. In addition, Nov. 2 marked the fourth year of human

habitation on the International Space Station and research aboard the Space Station is focused to support the Vision for Space Exploration.

All of the Agency's work has been done in good faith as conscientious stewards of our country's space program. And through it all, whether it was a new initiative, a celebration of a scientific breakthrough or the newness of change, the workforce remained steadfast and focused.

I'm proud to be a part of the NASA Family and I am especially proud to lead the Marshall Center. We have exciting and challenging work ahead, such as the DART launch. That launch — the demonstration of unmanned spacecraft rendezvous in space — will be a first in the history of U.S. spaceflight. And, major assembly of the International Space Station will resume with the Space Shuttle's return to flight in May 2005. I know I can count on you to continue your strong resolve to be rigorous in the execution of our work, and rigorous in meeting high standards for our customers.

*We rolled up our sleeves and worked many long hours to take care of America's space program*

*-David King*

## Milestone

*Continued from page 1*

"It's certainly great to see the assembly of the vehicle begin," said Michael Rudolphi, manager of Space Shuttle Propulsion Office at NASA's Marshall Center. "This is an important milestone on the road back to U.S. human spaceflight."

The Solid Rocket Boosters are the largest solid rockets ever designed. Each is 149 feet high and 12 feet in diameter and produces 2.65 million pounds of thrust at liftoff. Each Booster consists of multiple segments — solid propellant; solid rocket motors, vertically stacked with a nose

cone on top; and the aft skirt, or base of the Booster, on which the entire vehicle weight rests prior to launch.

Stacking, or assembling the Reusable Solid Rocket Motors into the Booster, begins with transferring the aft skirt from the Rotation, Processing and Surge Facility to the Vehicle Assembly Building. When the segment arrives, it is mounted on the Mobile Launch Platform. The segment is attached to the platform with four, 28-inch-long, 3.5-inch-diameter bolts.

Cranes are used to continue stacking the remaining fueled segments, the top of the booster, called the frustum, and the nose cone to form a complete Booster.

The Solid Rocket Boosters work with the main engines for the first two minutes of flight to provide the additional thrust needed for the Shuttle to escape the gravitational pull of the Earth. At an altitude of approximately 24 nautical miles, the Boosters separate from the External Tank, descend under parachutes, and land in the Atlantic Ocean.

# Announcements

## ***Tree lighting, Holiday Reception set at the Marshall Center***

The Marshall Center's annual tree lighting ceremony will be at 4:45 p.m. Dec. 6 in front of Bldg. 4200.

The Holiday Reception will be from 1 to 3 p.m. Dec. 9 in the Center Activities Bldg. 4316. This year's theme is "Holiday Magic in the Snow."

The reception will feature music, food and door prizes. To be eligible for door prizes, team members must make donations of non-perishable food items for the North Alabama Food Bank. Team members must also be present to win. Transportation will be provided.

For more information, call Angela Storey at 544-0632 or Andrea Nunn at 544-8965.

## ***AARP safety course set***

The Marshall Center and the American Association of Retired Persons are sponsoring a safety course for drivers over age 50 on Dec. 13 and 14. The course, limited to 30 people, will be held in Bldg. 4200, Room G13E. See "Inside Marshall" for registration.

## ***Management Operations Office Retirees to meet Dec. 16***

The next Management Operations Office Retirees meeting will be at 10 a.m., Dec. 16 at the Cracker Barrel Restaurant in Madison. For more information, call Linda Zielinski at 544-1498.

## ***Alabama Update with Gov. Bob Riley is Dec. 8 at VBC North Hall***

The Madison County Chamber of Commerce will present the 2004 Alabama Update with Alabama Gov. Bob Riley at noon, Dec. 8 in the Von Braun Center North Hall. Tickets are \$27 and may be purchased from Rosa Kilpatrick of the Government and Community Relations Office through Dec. 3.

## ***MARS Ballroom Dance Club Christmas dance is Dec. 4***

The Marshall MARS Ballroom Dance club will hold its annual Christmas Dinner Dance on Dec. 4 at the Von Braun Center East Hall. The semi-formal event begins with a social at 6:30 p.m. and dinner at 7 p.m. Dance from 8-11 p.m. to the music of The Little Big Band. Ticket are \$20 for MARS Dance Club members and \$25 for all others. Call Pat Sage at 544-5427 for more information or see "Inside Marshall."

## ***IEEE Gold Meeting is Dec. 8***

An IEEE Gold Meeting will be from 5:30-7 p.m., Dec. 8 at the University of Alabama in Huntsville Engineering Building, Conference Room 258. John Maxwell of The Boeing Company will speak on "Power Systems for Modern Spacecraft." Food and beverages will be provided. Contact Courtney Spivey at 464-4878 if you plan to attend.

## ***Mayor Loretta Spencer is Marshall Association speaker***

Huntsville Mayor Loretta Spencer will Speak at the next Marshall Association Luncheon at 11:30 a.m., Dec. 2 at the Redstone Officers' and Civilians' Club. She will discuss Huntsville's future and the Marshall Center. Contact Roslin Hicks at 544-7795 by Nov. 29 for reservations.

## ***Marshall's pre-retirement Planning seminar is set***

The annual Marshall Center pre-retirement planning seminar will be Dec. 7-9, beginning at 8:30 a.m. On Dec. 7 and 9, the seminar will be held in the Morris Auditorium, Bldg. 4200. On Dec. 8, it will be in Bldg. 4200, Room 329. Marshall employees and their spouses are welcome to attend. Registration is not required, but employees should notify their supervisor and administrative officer before attending. For an agenda, see "Inside Marshall."

Due to a software problem the Marshall Star was unable to include some of the center announcements. We apologize for any inconvenience. For more information, please call 544-0030 or 544-3749.

## Classified Ads

### Miscellaneous

Oak computer desk with hutch, best offer. 772-7262

Cherry lumber, air-dried, 230 board feet, \$1 per ft. 772-9768

Ranger 2950 radio, MFJ noise bridge, Wilson magnetic antenna, PDC 600LP meter, power/SWR meters. 464-5685

Nokia 5180 cellular phone w/2 batteries, AC and car charger, \$25. 256-503-8040

1985 Ensoniq keyboard, sampler and synthesizer, manual, \$75. 509-0196

Digimax 200 digital camera, 2.1M pixel, 2X zoom. 351-9467

Decorative cast iron vent-free thermostatically controlled zero-clearance gas heater, 35K BTU, \$375. 656-2965

Solid Cherry queen-size bedroom suite: headboard, footboard, mattress/boxspring, chest, dresser/mirror, \$350. 722-9614

Smith & Weston 357 magnum, Mod. #686, stainless, Hogue grips, holster, \$490. 508-5655

Jogging stroller, \$50. 881-1115

Longerberger baskets: 1989 Inaugural, \$275; First All-American, medium berry, \$100; 1991 Mothers Day Potpourri, \$50. 379-2159

Comic books: X-Force, 1-72 plus extras, bagged & boarded, \$40. 885-2448

Marshall AVT100 guitar amp, new foot pedal, \$375; Digitech RP80 FX pedal, \$40. 256-777-8229 lv. msg.

Silent Flame wood-burning insert w/blower, \$500; Briggs & Stratton 3-N-1 chipper/shredder w/swivel shoot, 10HP, \$300. 880-6335/Keith

Double reclining love seat, plum, cloth, 3-yrs. old. 256-728-4113

Antique Brunswick pool table, regulation size, 3-piece slate, includes antique balls & cues w/rack, \$1,200. 880-1943

Paintball equipment, used once, \$145. 830-1820

Wooden pedestal kitchen table, 48" diameter, \$45. 722-8004

Baby bed w/mattress, \$70. 883-2555

Children's battery-powered jeep, ages 3-6, \$65; gas furnace, \$300. 256-723-4983

Aluminum semi-V fishing/duck hunting boat, 15', Johnson 18HP trolling motor, tilt-trailer, \$800 firm. 256-351-6996

K-TEC high-speed flour mill, grinds all types of grain, \$100. 882-2369/Krebsbach DVD-R/RW CD-R-RW, 6-in-1 internal drive, 4X DVD burn, \$40. 489-0136

Magnolia dinnerware, 8 piece, matching canister set, Magnolia pictures, 3 pieces. 829-0228

Convertible baby crib, Cherry finish, converts to toddler bed to full size bed, new mattress, \$175.

Ford F250 regular duty steel rims, 8-hole, 15", 8-1/2" wide, pin-stripes, white spokes, \$75. 464-7285

New Breezy 510 wheelchair with Jay cushion and rear wheels, \$400. 722-8086

Garmin GPSV gps unit, City Select & North American Metro-guide map sets, programming cable, \$200. 931-703-5956

Large collection of LEGOs, includes several complete sets, \$50. 721-9005

Walnut pencil post bed, dresser & 2 night stands, \$700; 44-gallon aquarium w/stand & accessories, \$250. 417-2654

Computer desk, 30x60, \$40; office desk, 24x54, \$60. 971-0571

Weight bench w/incline, leg extension attachment, weights, barbells, \$75. 430-0380

### Vehicles

2000 Ford Explorer Sport v6, 5-speed, 2WD, am/fm/cassette/CD, 68K miles, one-owner, \$8,000. 256-828-9798

2001 Ford Expedition XLT, 73K miles, rear air, towing, rear sensor, 6-disc, \$14,500. 895-0577

2001 Ford Explorer SUV, 2-door Sport, \$6,900. 233-6197

2002 Dodge Intrepid SE, blue, 36K miles, \$10,500. 509-2936

1993 Chevy Blazer, gray, AT/AC, 107K miles, \$2,500; 1997 Ford Aerostar, green, 187K miles, \$1,500. 520-2802/Ron

1996 Ford Ranger XLT, super-cab, teal, 4L/V6, 5-speed, 100K miles, loaded, \$5,500. 232-1644

1998 Ford F150 XL, V6, auto, LWB, cruise, AM/FM/cassette, tilt, bedliner, Red, 99K miles, \$5,800. 656-9009

2000 Mazda Miata LS, 37.5K miles, BRP supercharger, all maintenance records, \$13,750. 656-0461

2004 Chevrolet Avalanche, black, 4-door, all-power, tinted glass, loaded, \$21,500. 464-3280

1999 Dodge Dakota extended cab, V8, automatic, 4WD, many options, 79K miles, \$10,950. 880-6146

2002 Hyundai Sonata, power moonroof, auto, 20K miles, all-power, side airbags, 4-cyl., silver, \$12,000. 880-9025

2002 Nissan Maxima GLE, loaded, 21K miles, 3-month warranty, \$17,500. 536-0655

### Wanted

Ride from near Huntsville Hospital, 7 a.m. to 3:30 p.m., will pay \$7 per day. 533-6980

Copies of Herschel Hobbs Sunday School Commentaries. 726-9343

### Free

Introductory lessons to artistic glass blowing/sculpting. 837-1006

### Found

Glasses w/eye case, NASA logo apparel; earring; necklace, and key. 544-3632 to claim/identify

Game Boy Advance, Super Mario Brothers 3-game cartridge, Parking Lot, Bldg. 4708. Call 544-5408 to claim/identify

## MARSHALL STAR

Vol. 45/No. 12

Marshall Space Flight Center, Alabama 35812  
(256) 544-0030  
<http://www1.msfc.nasa.gov>

The Marshall Star is published every Thursday by the Internal Relations and Communications Department at the George C. Marshall Space Flight Center, National Aeronautics and Space Administration. Contributions should be submitted no later than 5 p.m. Friday to the Marshall Internal Relations and Communications Department (CS10), Bldg. 4200, room 101. Submissions should be written legibly and include the originator's name. Send electronic mail submissions to: [intercom@msfc.nasa.gov](mailto:intercom@msfc.nasa.gov) The Marshall Star does not publish commercial advertising of any kind.

Manager of Internal Relations  
and Communications — Steven Durham  
Editor — Patricia Dedrick Lloyd

U.S. Government Printing Office 2005-733-048-60132

Permit No. G-27  
NASA  
Postage & Fees PAID  
PRE-SORT STANDARD